

REMARKS

The Specification has been amended solely to correct informalities noted by the Examiner. Thus, the amendment to the Specification does not add new matter, and Applicants respectfully request that it be entered. A marked-up copy of the replacement paragraph is provided in Appendix A.

After entry of the instant amendment Claims 1-11 are pending. The Claims have been amended for the purpose of more clearly defining what Applicants regard as the invention. Amended Claim 1 recites a method of making cartilage, which is supported in the Specification at, for example, page 17, line 26; page 18, line 10; page 20, line 14, and thus does not add new matter. New Claim 8 recites a method of forming a tissue equivalent in a subject, which is supported in the Specification at, for example, page 4, line 20 through page 5, line 20 and page 17, line 17 to page 20, line 20. New Claim 9 recites a method of making a tissue equivalent comprising, in part, injecting a suspension of dissociated cells in a solution of a biocompatible polymer into a mold, which is supported in the Specification at, for example, page 18, lines 1-2 and page 19, lines 21-26. New Claim 10 is supported in the Specification at, for example, page 20, lines 3 through page 21, line 27. New Claim 11 is supported in the Specification at, for example, page 5, lines 14-20. The dependencies of Claims 2-7 have been amended in accordance with the other amendments. Thus, none of the amendments or new claims adds new matter. Accordingly, Applicants respectfully request entry of the amendments and new claims.

Marked-up copies of the amended claims are provided in Appendix B. For the Examiner's convenience, a copy of the claims as pending after entry of the instant Amendment is provided in Appendix C.

1. The Objection

The Specification is objected to for failing to provide at page 1, line 6 the application serial number and the patent number of the application from which the instant application claims priority. Applicants have amended the Specification accordingly, and respectfully request that the instant objection be withdrawn.

2. **The Rejections**

a. **Rejection of Claims 1-7 Under 35 U.S.C. § 102(b) by Soong-Shiong**

Claims 1-7 are rejected as allegedly anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 5,700,848 to Soong-Shiong. Without agreeing with the propriety of the rejection, Applicants respectfully point out that Soong-Shiong does not teach a method of making cartilage, a method of forming a tissue equivalent in a subject, or a method of forming a tissue equivalent comprising injecting a suspension of dissociated cells in a solution of a biocompatible polymer into a mold. Thus, the rejection is inapposite to amended Claim 1, new Claim 8 or new Claim 9, or to the remaining claims, each of which ultimately depends from Claim 1, 8 or 9. Accordingly, Applicants respectfully request that the instant rejection be withdrawn.

b. **Rejection of Claims 1-7 for Obviousness-Type Double Patenting Over U.S. Patent No. 6,224,893**

Claims 1-7 are rejected for alleged obviousness-type double patenting over U.S. Patent No. 6,224,893. Without agreeing with the propriety of this rejection, Applicants respectfully defer deciding whether to file a terminal disclaimer until all other grounds for rejection have been removed from the claims.

CONCLUSION

In view of the above amendments and remarks, the subject application is believed to be in good and proper order for allowance. Early notification to this effect is earnestly solicited.

If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is encouraged to call the undersigned at (650) 493-4935.

The commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 16-1150 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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Appendix A
Serial No.: 09/724,382
Marked-Up Copy of the Replacement Paragraph

Paragraph beginning at page 1, line 6:

This application claims priority to U.S. Serial No. 08/862,740, filed May 23, 1997,
[Express Mail Label No. EM290166797US] now issued as U.S. Patent No. 6,224,893, which
claims priority to U.S. Provisional Application No. 60/041,881, filed Apr. 11, 1997.

Appendix B
Serial No.: 09/724,382
Marked-Up Copies of the Amended Claims

1. (Amended) A method for [forming a tissue equivalent] making cartilage, comprising [:
providing a suspension of dissociated cells in a solution of a biocompatible polymer, wherein the polymer crosslinks upon exposure to free radicals to form a hydrogel,]
exposing [the suspension] a suspension of dissociated cells in a solution of a biocompatible polymer to free radicals generated by electromagnetic radiation from an electromagnetic source external to the suspension so that the electromagnetic radiation generates free radicals [which cause polymer crosslinking and forms the tissue equivalent] thereby forming the cartilage.
2. (Amended) The method of Claim 1, 8 or 9 wherein the electromagnetic radiation is selected from the group consisting of x-rays, ultrasound, infrared radiation, far infrared radiation, ultraviolet radiation, long-wavelength ultraviolet radiation, and visible light.
3. (Amended) The method of Claim 1, 8 or 9 wherein the suspension further comprises a photoinitiator.

Appendix C
Serial No.: 09/724,382
Claims as Pending After Entry of the Instant Amendments

1. (Amended) A method for making cartilage, comprising exposing a suspension of dissociated cells in a solution of a biocompatible polymer to free radicals generated by electromagnetic radiation from an electromagnetic source external to the suspension so that the electromagnetic radiation generates free radicals which cause polymer crosslinking and forms the cartilage.
2. (Amended) The method of Claim 1, 8 or 9 wherein the electromagnetic radiation is selected from the group consisting of x-rays, ultrasound, infrared radiation, far infrared radiation, ultraviolet radiation, long-wavelength ultraviolet radiation, and visible light.
3. (Amended) The method of Claim 1, 8 or 9 wherein the suspension further comprises a photoinitiator.
4. The method of Claim 3 wherein the photoinitiator is selected from the group consisting of erythrosin, phloxime, rose bengal, thionine, camphorquinone, ethyl eosin, eosin, methylene blue, riboflavin, 2,2-dimethyl-2-phenylacetophenone, 2-methoxy-2-phenylacetophenone, 2,2-dimethoxy-2-phenylacetophenone, and other acetophenone derivatives.
5. The method of Claim 4 wherein the suspension further comprises a cocatalyst.
6. The method of Claim 5 wherein the cocatalyst is selected from the group consisting of N-methyl diethanolamine, N,N-dimethyl benzylamine, triethanolamine, triethylamine, dibenzylamine, N-benzylethanolamine, and N-isopropyl benzylamine.
7. The method of Claim 6 wherein the cocatalyst is triethanolamine.
8. (New) A method for forming a tissue equivalent in a subject, comprising:
injecting a suspension of dissociated cells in a solution of a biocompatible polymer into a subject, and
exposing the suspension to free radicals generated by electromagnetic radiation from an electromagnetic source external to the injected suspension so that the electromagnetic radiation penetrates through tissue to generate free radicals thereby forming the cartilage.
9. (New) A method for forming a tissue equivalent, comprising:
injecting a suspension of dissociated cells in a solution of a biocompatible polymer into a mold, and
exposing the suspension to free radicals generated by electromagnetic radiation from an electromagnetic source external to the suspension so that the electromagnetic radiation generates free radicals thereby forming the cartilage.

10. (New) The method of Claim 2 wherein the x-rays, ultrasound, infrared radiation, far infrared radiation, ultra-violet radiation, long-wavelength ultraviolet radiation, or visible light is applied externally to the skin.

11. (New) The method of Claim 2 wherein the x-rays, ultrasound, infrared radiation, far infrared radiation, ultra-violet radiation, long-wavelength ultraviolet radiation, or visible light is applied within a synovial space to a polymer-cell suspension injected into an adjacent joint.